

Patent claims

1. A device for lengthening bones (5) or bone parts, in particular for transport of segments, with at least two elements which can be moved relative to one another, characterized in that at least one locking element (14.1, 14.2) can be moved axially in or along a guide element (1).
2. The device as claimed in claim 1, characterized in that the at least one locking element (14.1, 14.2) can be driven axially movably in or along the guide element (1) by means of at least one drive unit (2).
3. The device as claimed in claim 1 or 2, characterized in that the guide element (1) has an elongate, preferably continuous guide slot (6).
4. The device as claimed in at least one of claims 1 through 3, characterized in that the guide element (1) has, at each of its ends, radial through-openings (4.1, 4.2) for the passage and engagement of securing elements for fixing the guide element (1) in the bone (5) or bone parts.
5. The device as claimed in at least one of claims 1 through 4, characterized in that the guide element (1) has, at one end, a sleeve-like receiving opening (9) for the reception and engagement of a drive unit (2).
6. The device as claimed in at least one of claims 2 through 5, characterized in that the drive unit (2) is formed

by a motor element (10), if appropriate with downstream gear (11) and control unit (12), and by a spindle element (13) adjoining the motor element (10) or adjoining the gear (11), the at least one lock (14.1, 14.2) sitting on the spindle element (13).

7. The device as claimed in claim 6, characterized in that the spindle element (13) is designed as a threaded rod which passes through the at least one lock and engages with the latter.

8. The device as claimed in claim 6 or 7, characterized in that, by radial turning of the spindle element (13) or threaded rod, the locking element (14.1, 14.2) inserted into the guide slot (6) can be moved axially to and fro along the guide element (1).

9. The device as claimed in at least one of claims 1 through 8, characterized in that the locking element (14.1, 14.2) is designed with a rectangular or round cross section and engages at least partially over the outside of the guide slot (6) of the guide element (1).

10. The device as claimed in at least one of claims 1 through 9, characterized in that a bone part, in particular a bone segment (15), can be moved via the locking element (14) by means of the spindle element (13) being driven by the motor element (10), a separating site (16) being formed between a bone part and the bone segment (15).

11. The device as claimed in at least one of claims 1

through 10, characterized in that the locking element (14.1, 14.2) engages in the bone segment (15) for fixing it, in particular for axially moving it, or securing elements fix the bone segment (15) releasably on the lock (14.1, 14.2).

12. The device as claimed in at least one of claims 5 through 11, characterized in that the drive unit (2) can be pushed axially into the receiving opening (9), and the motor element (10) is fitted secure against rotation in the guide element (1), in particular in the area of the receiving opening (9).

13. The device as claimed in at least one of claims 6 through 12, characterized in that, at one end of the guide slot (6), there is a recess (7) for bearing the spindle element (13).

14. The device as claimed in at least one of claims 6 through 13, characterized in that two locking elements (14.1, 14.2) sit on the spindle element (13) and, upon actuation of the motor element (10), can be driven toward or away from one another in the guide slot (6) of the guide element (1).